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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,973	06/14/2005	Mats Dahlback	1026-0003WOUS	9490

49698 7590 10/26/2007

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EXAMINER	
ZHU, WEIPING	

ART UNIT	PAPER NUMBER
1793	

MAIL DATE	DELIVERY MODE
10/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/538,973	DAHLBACK, MATS	
	Examiner	Art Unit	
	Weiping Zhu	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-30* is/are pending in the application.

4a) Of the above claim(s) *27-30* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Claims 18-26 are currently under examination.

Applicant's election with traverse of Invention I, Claims 18-26 in the reply filed on October 10, 2007 is acknowledged. The traversal is on the ground(s) that all the claims of the application include features that concern the production and treatment of the sheet of a particular alloy and Dahlback (US 6,149,738) does not suggest any stretching step as defined in the claims of the instant invention. This is not found persuasive. As stated in the Office action dated September 10, 2007, the common technical feature in all groups is the method of producing and treating the sheet as claimed. This element cannot be a special technical feature under PCT Rules 13.2 because the element is shown in the prior art. Dahlback ('738) discloses a method of producing a sheet for a component in a fuel assembly for a nuclear light water reactor (col. 4, line 65 to col. 5, line 42), which is substantially identical to the claimed method. Even though Dahlback ('738) does not specify that the sheet was stretched as claimed, Dahlback ('738) discloses that during the heat treatment the flatness of the sheet was restored (col. 4, lines 52-59). It would have been obvious to one of ordinary skill in the art that the sheet of Dahlback ('738) would have been stretched during the heat treatment in order to become flat again as desired.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 18-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dahlback ('738).

With respect to claims 18-21, Dahlback ('738) discloses a method of producing and treating a sheet for a component in a fuel assembly for a nuclear light water reactor comprising (col. 4, line 65 to col. 5, line 42):

producing a sheet of a Zr-base alloy by forging, hot-rolling and cold-rolling in a number of steps, wherein said alloy contains by weight at least about 96% of Zr;

carrying out a β quenching when the sheet has been produced in the finished dimension or almost finished dimension; and

heat treating the sheet after the β quenching in a temperature range of 600-800° C (i.e. the α–phase temperature range of the alloy).

The heat treatment temperature range of Dahlback ('738) overlaps the claimed temperature ranges in the instant claims 20 and 21. A prima facie case of obviousness exists. See MPEP 2144.05 I.

Dahlback ('738) does not disclose that the sheet is stretched during the heat treatment. However, Dahlback ('738) discloses that during the heat treatment the flatness of the sheet was restored (col. 4, lines 52-59), which reads on the claimed

limitation. It would have been obvious to one of ordinary skill in the art that the sheet of Dahlback ('738) would have been stretched during the heat treatment in order to become flat again as desired.

With respect to claims 22-25, Dahlback ('738) does not disclose the remaining elongations as claimed. However, it is well held that discovering an optimum value of a result-effective variable involves only routine skill in the art. In re Boesch, 617, F.2d 272, 205 USPQ 215 (CCPA 1980). In the instant case, the remaining elongation of the sheet of Dahlback ('738) is a result-effective variable, because it would obviously affect the flatness and final properties of the sheet as disclosed by Dahlback ('738) (col. 4, lines 52-59 and col. 3, lines 59-67). Therefore it would have been obvious to one skilled in the art to have optimized the remaining elongation of the sheet of Dahlback ('738) in order to achieve a flat sheet with desired final properties. See MPEP 2144.05 II.

With respect to claim 26, Dahlback ('738) discloses that the sheet defines a longitudinal direction and the stretching is carried out in a direction corresponding to the longitudinal direction (e.g. in the case of continuous heat treatment, col. 4, lines 52-59). Dahlback ('738) does not teach that when the sheet is used in a fuel assembly, it is substantially parallel to a longitudinal direction of the fuel assembly as claimed. However, it would have been obvious to one of ordinary skill in the art that when the sheet is used in a fuel assembly, it would be substantially parallel to a longitudinal direction of the fuel assembly in order to take full advantages of the property enhancement of the sheet in the longitudinal direction resulted from the stretching during the heat treatment in the longitudinal direction.

Conclusion

3. This Office action is made non-final. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WZ

10/25/2007

ROY KING
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